

**REMARKS**

Claims 19-22, 24 and 26-45 are pending in this application; claims 10, 23 and 25 having been cancelled without prejudice or disclaimer; claims 19-22, 24 and 26-31 having been amended and new claims 39-45 having been added by this Amendment. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attachment is captioned **"Version with markings to show changes made."**

The fourth Office Action dated December 26, 2001 cited two new references and rejected claims 10 and 19-38 as being obvious over various combination of references, each combination including the two newly cited references. Unfortunately, a complete copy of one of the two newly cited references was not attached to the Office Action. Applicants thus filed a Request for Complete Copy of Reference and New Period for Response on March 13, 2002 requesting a complete copy of the newly cited reference and that a new period for response.

**Priority under 35 U.S.C. §119**

The certified copy of the Japanese priority patent application was filed on October 22, 1996 in parent application no. 08/690,358 (now U.S. Patent No. 5,991,747). In view of the significance of the claimed priority date to one of the newly cited references and to the outstanding obviousness rejection, applicants have additionally obtained and attach herewith a full English-language translation of the Japanese patent application. Applicants submit that the English-language translation establishes that they are entitled to the claimed priority date of August 2, 1995.

**Obviousness Rejections**

The Office Action rejects each one of claims 10 and 19-38 as being obvious over various combinations of references. Of particular relevance, the rejection asserts that the claims are rendered obvious by the device described in U.S. Patent No. 4,906,828 issued to Halpern (this device hereinafter referred to simply as “Halpern”), modified in view of a market research report from Business Communications Company entitled “The Market for Smart Cards in the US: Outlook for Transportation Applications, Demonstrations (Smart Cards: New Directions, 1996) (this document hereinafter referred to simply as “BCC Research Report”); and an article in the Los Angeles Times dated August 9, 1993 entitled “Transportation: Promoters Hope Advertizing and Marketing Gimmicks will Steer Freeway Drivers to the Region’s First Pay as You Go Highway” (this document hereinafter referred to simply as “LA Times newspaper article”). Applicants respectfully traverse the obviousness rejections at least because they fail to establish a prima facie case that the combination of references suggest each and every one of the combination of features recited in the claims.

For example, claim 10 recites features relating to when electronic data representing a balance “is less than said amount of money to be paid for the commercial transaction” and each one of the other independent claims (claims 25, 32 and 36) recites similar features. The obviousness rejection apparently acknowledges that Halpern does not contain these features in the claims. It states that the BCC Research Report “teaches the ‘Go-Card’ utilized on the Washington, DC metro system since 2/95, which will act as a credit card allowing a commuter to exit the Metro terminal without sufficient funds to pay the fare. The card will show a negative balance and when the commuter later adds fare the negative balance held in

smart card memory will be deducted from new monetary additions. These crediting operations may represent loans being made.” and that the LA Times newspaper article “teaches that prepaid accounts are allowed to carry negative balances for motorists on the freeway.” The rejection concludes that these statements would have motivated one of ordinary skill in the art to modify Halpern to “describe a loan transaction process for implementation on IC cards which permits the storage of excess spending (overdrafts) and equivalently, loans.”

#### BCC Research Report

The BCC Research Report was published in July 1996. It is not prior art because applicants have established that they are entitled to the claimed priority date of August 2, 1995 by submitting herewith an English-language translation of Japanese priority patent application No. 7-197573 filed on August 2, 1995. Consequently, even if the statements quoted in the BCC Research Report constituted a teaching that would have motivated one of ordinary skill in the art to modify Halpern as alleged in the obviousness rejection, such a teaching does not render the claims obvious because it was made after applicants’ priority date. In this regard, it is noted that the report repeatedly refers to a “test” or “test project” - for example, “Metro is the first mass transit system in the United States to test a smart card and is currently evaluating the project.”

LA Times newspaper article

The LA Times newspaper article is a general interest article describing a toll road to be opened in California. It mentions that cars will use dashboard-mounted transponders and smart cards inserted into the transponders like computer floppy disks “to exchange filling and vehicle information with a roadside computer, thus eliminating the need to slow down or stop at toll booths”.

The rejection mistakenly refers to a freeway rather than a toll road and quotes only a sentence of the article in isolation. The context of the quoted sentence becomes clearer when it is read in conjunction with the paragraphs on either side of it as follows:

“The experience with toll roads in other states is that the failure to pay is mostly deliberate rather than accidental, but is limited to 2% or less of the traffic volume.

To deter scofflaws, Orange County tollway officials plan to adopt an ordinance imposing stiff fines. The operations committee overseeing the Foothill Corridor recently recommended a \$76 fine three times the cost of a parking ticket but about half that of a typical speeding citation.

Two agency committees have recommended that violators be given 10 or 20 days to mail in a payment. After that, a \$10 processing fee would be added to the bill. After 20 to 30 days, officials would levy the fine.

Multiple violations are expected to draw tougher penalties, but at levels not yet specified.

Motorists with transponders and prepaid accounts would have a slight advantage. If their accounts are too low, they will be allowed to carry a negative balance. But they will be notified and asked to deposit additional funds in their accounts.

‘We view those as our chief customers, and we want to give them as much benefit of the doubt as we can,’ said Alice Bridge of Lockheed Corp., the firm hired to design, build and operate the toll collection system.

Violators will be entitled to an administrative hearing set up by the corridor agency. But officials haven’t decided yet how the matter would be taken to court later if necessary.

The violation ordinance, as currently proposed, would hold drivers and vehicle owners—even car rental companies—responsible for unpaid tolls and fines.” (underlining added)

Taken as a whole, the LA Times newspaper article describes efforts made to provide an improved toll collection system so that it will be attractive to motorists. The particular concern addressed by the paragraphs quoted above is the problem that a motorist will incur a traffic violation (with corresponding consequences) if their account is too low when they pass by a roadside computer. Applicants respectfully submit that the teaching that

one of ordinary skill in the art would take from the LA Times newspaper article is that it teaches improvement to a toll collection system. There is no discussion in the LA Times of smart cards generally and one of ordinary skill in the art would not apply the statements made therein to smart cards generally, and to Halpern in particular, except with the benefit of the hindsight provided by this application.

#### Claims 20, 30 and 35

In addition to the reasons provided above, claims 20, 30 and 35 are believed to be allowable for the additional reason that they recite features providing for an upper limit of the loan. The rejections of claims 20, 30 and 35 rely upon the portion of the circuitry of Halpern shown in Fig. 11 of U.S. Patent No. 4,906,828 (see page 5, lines 1-3, rejection of claim 30). While this circuitry may describe an upper limit, it is the upper limit of the amount of value which can be stored in the card. It is understood that the upper limit in Halpern is not the upper limit of the loan as recited in claims 20, 30 and 35 since Halpern the rejection acknowledges that Halpern does not provide for a loan.

#### Claims 21, 31 and 34

In addition to the reasons provided above, claims 21, 31 and 34 are believed to be allowable for the additional reason that they recite features providing for a term limit of the loan. The rejections of claims 21, 31 and 34 rely upon the same portion of the circuitry of Halpern shown in Fig. 11 of U.S. Patent No. 4,906,828 as the rejections of claims 20, 30 and 35. However, the rejection mistakenly fails to address the fact that claims 21, 31 and 34

address the term of the loan while claims 20, 30 and 35 address the upper limit of the loan. Nevertheless, the noted circuitry in Halpern provides for an upper limit of the amount of value which can be stored in the card - it does not provide for a term limit of the loan. Furthermore, it is understood that the upper limit in Halpern can not possibly be the term limit of the loan as recited in claims 21, 31 and 34 since the rejection acknowledges that Halpern does not provide for a loan.

#### Claims 32-35

In addition to the reasons provided above, claims 32-35 are believed to be allowable for the additional reason that independent claim 32 (claims 33-35 are dependent on claim 32) recite the features that the terminal “transmits loan information corresponding to said loan to said center when said electronic information representing a money balance is less than the amount of money to be paid for said commercial transaction, and said storage of said center stores said loan information.” The obviousness rejection of claim 32 relies upon the balance storage method described at col. 3, lines 4-49, and col. 3, lines 65, to col. 4, line 2 of U.S. Patent No. 4,963,722 to Takeuchi (see page 14, lines 4-8, of the Office Action). Applicants have reviewed the cited portions of the Takeuchi patent and cannot find any indication of these recited features.

#### Claim Amendments

Notwithstanding the above reasons in traversal of the obviousness rejection, applicants have canceled claims 10, 23 and 25 without prejudice or disclaimer, amended

claims 20, 21, 30 and 31 to be in independent form and amended claim 36 to include the limitations of claims 30 and 31. The claims previously dependent on claims 10 or 25 have been amended to depend on one of claims 20 and 30. New claims 39-4 are dependent on one of claims 21 and 31.

Although applicants have not yet received an indication that the Request for Complete Copy of Reference and New Period for Response filed on March 13, 2002 has been granted, applicants respectfully submit that they should not be required to pay extension of time fees for the Office Action dated December 26, 2001 for the reasons noted therein.

To the extent necessary for the consideration of this Amendment, Applicants petition for an extension of time under 37 CFR §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees or additional claim fees, to Deposit Account No. 01-2135 (Case No. 501.34746CX1) and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Robert Bauer", written in a cursive style.

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

Claims 19-22, 24, 26-31 and 36 have been amended as follows:

19. An electronic purse loan device according to claim ~~10~~ 20, wherein said processor checks whether or not said IC card is registered.

20. An electronic purse loan device ~~according to claim 10~~ using an IC card having a balance information storage which stores electronic money information representing a balance and a loan information storage which stores information representing a loan, comprising:

an IC card reader/writer which reads information stored in said IC card and writes information to said IC card; and

a processor which, when a commercial transaction is made, subtracts an amount of money to be paid for said commercial transaction from said balance information storage;

wherein said IC card reader/writer writes information representing a loan into said loan information storage when said electronic money information representing a balance is less than said amount of money to be paid of the commercial transaction,

wherein said processor checks said information representing a loan stored in said IC card and inhibits the commercial transaction if the amount of money to be paid for it is greater than a predetermined amount of money.



21. An electronic purse loan device ~~according to claim 10~~ using an IC card having a balance information storage which stores electronic money information representing a balance and a loan information storage which stores information representing a loan, comprising:

an IC card reader/writer which reads information stored in said IC card and writes information to said IC card; and

a processor which, when a commercial transaction is made, subtracts an amount of money to be paid for said commercial transaction from said balance information storage;

wherein said IC card reader/writer writes information representing a loan into said loan information storage when said electronic money information representing a balance is less than said amount of money to be paid of the commercial transaction,

wherein said processor checks said information representing a loan stored in said IC card and inhibits a loan if the term of the loan is greater than a predetermined term.

22. An electronic purse loan device according to claim ~~10~~ 20, wherein said IC card reader/writer reads from/writes to the information stored in said IC card without contacting said IC card.

24. An electronic purse loan device according to claim ~~10~~ 20, further comprising a display which displays information indicating that said electronic money information representing a balance is less than said amount of money to be paid for said commercial transaction.

26. An IC card according to claim ~~25~~ 30, further comprising:  
a data input/output circuit which inputs/outputs electronic data representing money from/to an external terminal in an electric purse loan system without contact.
27. An IC card according to claim ~~25~~ 30, further comprising:  
a connector which inputs/outputs electric money data from/to an external terminal in said electric purse loan system.
28. An IC card according to claim ~~25~~ 30, further comprising:  
an ID number memory which stores a ID number registered for a person.
29. An IC card according to claim ~~25~~ 30, wherein said transaction is a train fare or a bus fare.
30. An IC card ~~according to claim 25~~ used in an electronic purse loan system, comprising:  
a balance memory which stores electronic data representing a money balance;  
a loan memory which stores electronic data of a loan; and  
a processor which writes electronic data of a loan into said loan memory when said electronic data representing a money balance is less than the amount of money required for a transaction,

wherein said electronic data of a loan includes electronic money information representing the upper limit of a loan.

31. An IC card ~~according to claim 25~~ used in an electronic purse loan system, comprising:  
a balance memory which stores electronic data representing a money balance;  
a loan memory which stores electronic data of a loan; and  
a processor which writes electronic data of a loan into said loan memory when said electronic data representing a money balance is less than the amount of money required for a transaction,

wherein said electronic data of a loan includes information representing the term limit of a loan.

36. A method of carrying out a transaction using an IC card, comprising:  
storing electronic data representing a money balance in a balance memory;  
storing electronic data of a loan in a loan memory; and  
writing electronic data of a loan into said loan memory when said electronic data representing a money balance is less than the amount of money required for a transaction,  
wherein said electronic data of a loan includes information representing the upper limit of a loan and information representing the term limit of a loan.